

### ABSTRACT

A method and apparatus for improving uniformity of the rate of removal of material from the surface of a workpiece, such as semiconductor substrate, by polishing. In accordance with the invention, the workpiece is subjected to a vibratory polishing method, and optionally at least one additional polishing motion selected from rotational, oscillating, sweeping, orbital and linear polishing motions. As a result, polished workpieces, such as semiconductor wafers, have reduced surface defects, improved planarity, and are polished more uniformly over a wider area.

